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Correspondence.

WE invite communications from our reader in matters connected with the trades we represent. Be bries, courteous, and to the point.

Editor of the Wood-Worker:

THE last issue of the WOOD-WORKER is the best yet out. Give it to us fortnightly, or weekly, next year, if possible. Better worth ten cents per number than any publication I know of. M. P. SMITH.

Editor of the Wood-Worker:

In the September number of the Wood-WORKER there is an illustration by Mr. Riddell on Projection which I don't quite understand. I would like to have explained through your columns how the points for describing the ellipse shown are obtained; also, how the bevels are found.

In the article in question your readers are referred to back numbers of the Wood-WORKER for information; but this is somewhat indefinite, as unskilled readers do not know how to apply previous illustrations to

the matter in hand.

A little more light on the subject would certainly be of service to a subscriber from the first. Wм. R.

In reference to the above we may say that "Wm. R." will find a method for describing an ellipse on Plate 22, Fig. 1, March number of the Wood-Worker. This method can easily be adapted to the problem that seems to puzzle our correspondent so much. In a subsequent number we will give an illustration showing how the method is applied, and how the bevels are obtained and used.—ED.]

Editor of the Wood-Worker:

I HAVE taken your paper from the first, and on the whole am much pleased with it, though compelled to say its usefulness is very much lessened by the drawings being without scale, and in most cases without any plan of the frame, or idea as to finish. I am an amateur in wood, and am able to form pretty correct estimates of height, width, etc., by comparison with something else in the drawing; for instance, with a chair, or some other article of generally the same height, but this cannot be done in all cases; for if we take Plate 69, September number, the term "small" Japanese cabinet is used. Now the term "small" is so indefinite that I am entirely at a loss to know whether it is small as compared with one 6 or 8 feet high, or with one 3 feet This is no doubt due to my want of skill in such matters, but as your journal is for amateurs as well as professionals, I am satisfied it would be much more highly appreciated if these little points were attended to more in detail. At present it is very much like making your own design to determine the size, detail, finish, etc., suitable for any given piece.

[The above letter was not intended for publication, but as we have received several letters written in the same vein during the last month, we are persuaded that the subject is deserving of consideration, and we are sure our designers will keep the above hints in mind when preparing drawings for our pages in future. At any rate, we are fully convinced that, when possible, it would enhance the usefulness of the designs reproduced if a graphic scale was added to each one.—Ed.]

WE are in receipt of a communication from L. D. Gould, author of "The American Stair-Builders' Guide," in answer to a criticism of his work in our November number by Wm. H. Croker. The communication came to hand too late for publication in the present issue, but will appear in the January number of the Wood-Worker.

Intercommunication.

This department is intended to furnish, for the benefit of alour readers, practical information regarding the art of manipulating wood by hand or machinery; and we trust that every reader of our paper will make the fullest use of it, both in asking and answering. All persons possessing additional or more correct information than that which is given relating to the queries published, are cordially invited to forward it to us for publication. All questions will be numbered, and in replying it will be absolutely necessary, in order to secure due insertion, that the Number and title of the question answered should be given; and in sending questions, the title of key-words of the question should be placed at the liest of the paper. Correspondents should in all cases send their addresses, not necessarily for publication, but for future reference. We also request that all questions or answers be written on separate slips of paper, and addressed to the Editor. Notes of practical interest will be welcome at all times. When drawings are sent to illustrate answers to questions, or for full pages, they should be on separate slips, and should be drawn in ink on clean, white paper. Short questions, requiring short answers, may be asked and answered through the agency of postal cards.

When answers to questions are wanted by mail, the querist must send a stamp for return postage.

Queries.

- 96. BALUSTER.—How is the body of balusters formed by machinery into octagon twists, or rope moulding? I have been informed that it is done in a lathe, but the process was not explained. Any one enlightening me will much oblige.—E. K.
- 97. Rope Moulding.—Is there any machine outside of a moulding machine that will make rope-moulding expeditiously? How is it done on a moulding machine, and can it be turned out in long pieces, say 12 feet on the lathe? A full explanation of the process of manufacturing rope moulding from you, or any of your readers, will please ROPE MOULDING.
- 98. GELATINE.—Could you, or any of your readers, give me any information on "cartonpier" and gelatine moulds? you will oblige a SUBSCRIBER. By doing so

99. HAND AND FOOT-POWER MACHINES. -Will some one who has had experience with circular saws driven by hand or foot give me some information regarding their experience with said machines? I wish to know who makes the best machines, and if a foot-power machine is capable of cutting 1½-inch stuff with ease? How many feet (run) will the best cut in a day of ten hours? Can door-tenons be cut with them?—HAG's Тоотн.

100. WHITE HOLLY.—How is white holly stained a dark brown for scroll-sawing?-AMATEUR.

101. Door for Hanging Cabinet.-Will some of your contributors please furnish a design for a door in which a round china plaque has been inserted? The door is for a hanging cabinet.—JONGLEUR.

102. Drawing.—Will some one give me the definition of Solid and Free-Hand Drawing?—Student.

Answers.

WE wish it distinctly understood that we do not hold ourselves responsible for the accuracy or reliability of answers furnished to this department by our correspondents.

We cordially invite our readers to take an active part in this department, as we are confident that much good can be accomplished by a free interchange of ideas and opinions in regard to subjects connected with the art of wood-working.

Many persons are affaid to write to a public journal because of their lack of literary attainments; to such we would say: Give us your ideas in such language as you can command, and leave the rest to us. It is ideas and opinions we want, such as may be of use to the workingman or amateur. Answers should be sent to this office on or before the fifteenth of each month, to insure insertion in the next issue.

85. STAIN.—Take 1 quart of alcohol, 3 ozs. of ground turmeric, $1\frac{1}{2}$ oz. of powdered gam-When the mixture has been steeped to its full strength, strain through fine muslin. It is then ready for use. Apply with a piece of fine sponge, giving the work two When it is dry, sand-paper down It is then ready for varnish or very fine. French polish, and makes an excellent imitation of the most beautiful satinwood.—Ru-

86. OLD FURNITURE.—After you have completed the repairs the pieces introduced should be washed with soap-lees, or with The mixture quicklime dissolved in water. should be rather weak when first used, and if not sufficiently dark repeat the process till the wood is adequately darkened. Stains may be taken out of mahogany by spirits of salt (muriatic acid). In repairing old cabinets and other furniture, blisters will frequently be formed on the surface, in consequence of the glue under the veneer failing, thus causing the veneer to separate from the ground in patches, and these blisters are so situated that, while separating the whole veneer from the ground, it is impossible to introduce any glue between them to relay it; the great

difficulty is to separate the veneer from the ground without injuring it. The process may be successfully performed as follows: Wash the surface with boiling water, and with a coarse cloth remove dirt or grease; then place it before the fire, or heat it with a candle; moisten the surface with linseed oil, place it again before the fire, when the heat will cause the oil to penetrate the veneer and soften the glue beneath; then, while still hot, raise the edge with a chisel, and the surface will separate bodily from the ground; be careful not to use too great force. If the surface should become cold during the operation, apply more oil and heat it again; repeat this process till the veneer is entirely separated; then wash off the old glue, and proceed to lay it again as a new veneer.-WILL.

87. CARVERS' SQUEEZING WAX .- Young Carver will find either of the following suitable for his purpose: Take suet, 1 part; beeswax, 2 parts. Wax, 5 parts, olive oil, 1 part. Wax, 4 parts; common turpentine, 1 part. The parts only need be melted together, and allowed to cool; the wax is then fit for use. It should be well pressed into the carving. Sometimes it is only possible to take the front or side of an object at a time, as it must be drawn off in the form of a mould. The sections, when ready, should be filled with plaster of Paris and water, made into a thick paste, and allowed to set. The mould is then removed, and the plaster cast is ready to work from .- AMATEUR.

87. Carvers' Squeezing Wax.—Carvers, in cutting moulds for compo, papier-maché, candies, etc., use soft wax as they progress to regulate the depth, or a piece of bread can be worked up in the fingers until soft like dough. The head should be fresh when it will give a good impression.—OLD CARVER.

88. MAHOGANY SIDEBOARD.—When the veneer is bruised it may be brought up with a warm iron, not laid on, but held just over the bruise; then rub on the bruise with a flannel soaked with linseed oil where the pieces are chipped off. Melt some pale shellac and run it in the places, then paper off, and well oil it in every part; the shellac may be melted with a red-hot iron and smoothed with a hot iron, taking care not to burn the surrounding parts; the oil should lie on for a few days. Then remove the same, and well rub with a mixture of oil and turps, or it may be varnished with brown hard varnish and polish, one part of polish to two of varnish. If the corners have large pieces of veneer out, better lay in other pieces, cutting out the broken edges with a sharp knife, glueing in new pieces; the new pieces should be damped with hot water, then glued and pressed in place with a hot iron; the best plan is to lay a larger piece than required. Keep in place with a heavy weight or thumbscrew; when dry finish off with chisel and glass-paper. The new veneer will be lighter than the other parts; to darken, wet the new veneer with lime water, then let it dry. If not dark enough, give another coat, but due allowance should be made for the varnish, as this will darken a little. If care be used, the new may be made to match the old to a nicety. Shellac should be only used for small places, chips, holes, etc.—MUSTY.

90. PICTURE-FRAMES.—There seems to be no valid reason why picture-frames of large size should not be made of thin brass, stamped in varied designs, and richly gilded. The material would be much lighter, the gilding more permanent, and the cost considerably less, than the covered wood in use at present. Let the frames be made up of very short lengths, with mitred pieces sepa-The connection could be effected instantly by just leaving a flange at the end of each piece, and biting this flange over neatly with a pair of pliers. Prepare a rough wooden frame to hold the oil-canvas, or other picture, and on to this frame screw or otherwise simply affix the brasswork, and strength, and economy would each be the gainers. If this should succeed with pictureframes, probably it might be advantageously introduced for frames in other directionsfor the toilet, etc.—PORTRAIT.

91. GLUE.—Glue frequently cracks because of the dryness of the air in rooms warmed by stoves. An Austrian paper recommends the addition of a little chloride of calcium to glue to prevent this.—X.

92. AILANTHUS.—In experiments made in the French dockyard at Toulon, where the wood of this tree was tested as to its tenacity, or ability to resist a strain, in comparison with the timber of European elm and oak, an average of seven trials showed that the ailanthus broke with a weight of 72,186 pounds, while the elm in a similar number of trials yielded to 54,707 pounds, and the oak, in the average of ten specimens, broke under a weight of 43,434 pounds. Evidence as to the value of ailanthus timber in exposed situations as to its durability when set in the ground is yet meagre, but the little that we have is favorable. Of its value for interior work and for cabinet-making there can be no doubt, the wood possessing properties remarkable in so rapid-growing a tree. The wood is at first of a pale straw-color, but grows somewhat darker with age, and takes a high polish. When cut to show the silver When cut to show the silver grain it presents a satiny lustre; and as regards freedom from warping and shrinking,

it is superior to walnut, and fully equal to mahogany. It is said to cut up economically, seasons readily, is easily worked, is free from unpleasant odor, and has no illeffects on the tools. For the treads of stairs, the floors of offices, mills, and other buildings, where constant use requires a hard, strong wood, it is probably superior to any of the woods commonly employed in such situations. There is one use for which its freedom from tendency to shrink will especially commend it—i.e., interior finishing. Its warm color will make it very effective, when used with both lighter and darker woods.

CURIOSITY.—To dye veneers, soak them for 24 hours in a solution of caustic soda containing 10 per cent of soda, and boiled therein for half an hour; after washing them with sufficient water to remove the alkali, they may be dyed through these means by keeping them under the surface of the dye by a weight, a stone being preferable for that purpose. Solution of caustic soda can be made by taking 3 ounces of washing soda, 1½ ounce of lime, and 2 pints of water. Let the water be boiling, and pour one half of it on the soda. Slake the lime, and pour the balance of the water on it. Mix the hot liquors, and boil for ten minutes and stir constantly. Then set aside on a covered vessel to settle, and pour off the water. Take 10 parts of this solution, and add it to 90 parts of water to make the alkaline bath mentioned above. - EUREKA.

91. Glue. — To prevent glue cracking when dry, add about one tablespoonful of glycerine to a pint of the solution while it is hot.—Eureka.

94. Young Draughtsman.—Sun Tracings—Blue. First solution: Ammonia citrate of iron, 1½ ounce; water, 1½ ounce. Dissolve. Second solution: Red prussiate potassa, 1½ ounce; water, 8 ounces. Dissolve. Place the first solution in a shallow vessel (not metal) and immerse the paper for five minutes or so. Take it out; drain and dry in the dark. Place it with the print to be copied in a photographer's printing frame, and expose to the sun, examining it occasionally to see that it is being printed distinctly; then take it out and wash thoroughly in water and dry.

out and wash thoroughly in water and dry.

For Black Printing. — First solution:
Perchloride of iron, 50 grains; tartaric acid,
15 grains; water, I ounce. Soak the paper
in it, and expose in printing frame. Then
plunge for an instant in water; then in a
saturated solution of either gallic acid or decoction of galls or a mixture of gallic and
pyrogallic acids. The impression is gallotannate of peroxide of iron. Soft water
must be used in the above printing operations.—Eureka.

94. Sun Tracings.—For the benefit of "Young Draughtsman," who wishes to know the process of making sun tracings from drawings, I send you the following method, as practised by myself and many others in this city: For convenience in measurement the draughtsman should provide himself with a black or very dark blue bottle that will hold about twenty ounces of water, and cover it with cloth or any material that will exclude the light. Into this put 17 ounce of citrate of iron and ammonia, 12 ounce of red prussiate of potash, and fill with water. The bottle should then be put away in a dark place till the mixture is dissolved, which will be in about five hours. The paper to be printed should be coated evenly on one side with the mixture, and allowed to dry, when it will be ready for use. The drawings to be copied should be made on transparent tracing cloth, and drawn distinctly with very black ink. The prepared paper is then laid on a flat, smooth surface, with the drawing spread smoothly over it, and both covered with a piece of plate glass and exposed to the sun for ten or fifteen minutes. The prepared paper is then removed and washed with clean water till the lines of the drawing appear perfectly white.—J. M. D.

PIANO. — A writer has taken the trouble to give the actual material used in constructing a piano-forte. In every instrument there are fifteen kinds of wood-viz., pine, maple, spruce, cherry, walnut, whitewood, apple, basswood, and birch, all of which are indigenous; and mahogany, ebony, holly, cedar, beech, and rosewood, from Honduras, Ceylon, England, South America, and Germany. In this combination elasticity, strength, pliability, toughness, resonance, lightness, durability, and beauty are individual qualities, and the general result is voice. There are also used of the metals iron, steel, brass, white metal, gun metal, and lead. There are in the same instrument of seven and one half octaves, when completed, 214 strings, making a total length of 787 feet of steel wire, and 500 feet of white covering Such a piano will weigh from 900 to 1000 pounds, and will last, with constant use, not abuse, fifteen or twenty years.

We see no valid reason why a skilful amateur should not be able to construct a piano. Such things have been done by amateurs,

and may be again.—ED.]

95. CAUL.—A "caul" is a piece of wood shaped so as to fit over veneering to hold it in place whilst drying. It is sometimes warmed before applying to the veneer; hence the phrase, "Caul warm or cold." The caul is held firmly on to the veneer, and the work to be veneered by a number of

J. WILLIS, Newark; Tom Watts, Philadelphia; J. B. Hartford, and Thomas Dury, Milwaukee, are informed that Plate 48, June number of the Wood-Worker, was designed by F. W. Fieder, of this city, as was also Plate 45, in the same number, which shows two elevations for a square bay window.

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